UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/706,074	11/03/2000	Michael O. Rabin	2645.2001-000	6156

21005   7590   04/13/2004

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA   01742-9133

EXAMINER
HEWITT II, CALVIN L

ART UNIT	PAPER NUMBER
3621	

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *17 February 2004*.
2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *46-72* is/are pending in the application.

    4a) Of the above claim(s) *1-45 and 73-124* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *46-72* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *2 and 5*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Status of Claims

1.   Claims 46-72 have been examined.

Claim Objections

2.   Claims 48, 51-53, and 64 are objected to under 37 CFR 1.75(c), as being

of improper dependent form for failing to further limit the subject matter of a

previous claim. Applicant is required to cancel the claim(s), or amend the

claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in

independent form.

The step of sending a continuation message of independent claim 46 does

not occur, if the call-up message is not valid (claims 48, 51-53 and 64).

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

the claimed invention lacks patentable utility.

Claims 46, 57-63 and 65-72 are abstract ideas. It has been held (*In AT &*

T Corp. v. Excel Communications Inc., 50 USPQ2d 1447) that even though, a

mathematical algorithm is not patentable in isolation, a process that applies a

mathematical equation, formula or algorithm to a new and useful end qualifies as

eligible subject matter outside the parameters of 101. Claim 46 (and 48), for

example, is dedicated to an algorithm for sending message, therefore, it is

nothing more than an abstract ideas as it has not been reduced to some type of

practical application (*State Street Bank & Trust v. Signature Financial Group Inc.,*

47 USPQ2d 1596). Sending a message, in the context of claim 46 (and 48), is

not useful. A message, however, that conveys information or instruction, on the

other hand, is. For example, the disputed claims of *Alappat* (*In re Alappat*, 31

USPQ2d 1545) were dedicated to an apparatus that performs mathematical

calculations for producing the useful, concrete, and tangible result of a rendering

an image (i.e. smooth waveform display). In *State Street*, the subject matter was

deemed patentable because the system took data representing discrete dollar

amounts through a series of mathematical calculations for determining a final

share price, while in *AT&T v. Excel Communications*, the subject matter was

directed to generating a message record for an interexchange call between an

originating subscriber and a terminating subscriber. Similarly, absent of providing

a useful, concrete and tangible result, the mere storing or arranging of data in

computer memory does not define patentable subject matter (claims 47, 49, 54,

55, 59, and 67)

Claims 47-72 are also rejected as they depend from claim 46, and claims

47-49, 54, 57-63 or 65-72.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 49, 50, 55 and 60-64 are rejected under 35 U.S.C. 112, first

paragraph, as failing to comply with the enablement requirement. The claim(s)

contains subject matter which was not described in the specification in such a

way as to enable one skilled in the art to which it pertains, or with which it is most

nearly connected, to make and/or use the invention.

Claim 49 recites a guardian center storing call-up messages and

continuation messages. However, the Specification details only "re-sending" a

continuation message (Specification, page 42, lines 3-17).

Claim 50 is also recited as it depends from claim 49.

Claim 55 recites storing a continuation message in a tag table. However,

the Specification only provides for using the continuation message to verify and

update hash values (Specification, page 41, lines 12-24; page 42, lines 10-17;

page 44, lines 13-17), and to verify a Guardian Center's signature (Specification,
page 41, lines 19-24; page 44, lines 13-17; page 47, lines 28-29).

Claim 60 is dedicated to call-up processing over a plurality of call-ups and
a plurality of tag tables. Claim 64 is dedicated to multiple devices. The
Specification does not support these processes. The Specification merely recites
a user device having multiple tag tables (page 32, lines 20-22), call-ups
regarding a single table (page 38/14-41/28; page 58/22-61/15), and a statement
regarding how a feature of the Applicant's system prevents "attacks" that use
different user devices (page 42, lines 18-28).

Claim 67 recites "a hash function value of a portion of superfingerprints
included in continuation messages". However, the Specification only provides
support for Superfingerprints that include a list of hash values or a hash function
of the sequence of all the currently and previously sent Superfingerprints
(Specification, page 47,lines 4-12; page 49, lines 22-25; page/line 50/27-51/15).

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

7.   Claims 48, 50-53, 60-64 and 72 are rejected under 35 U.S.C. 112, second
paragraph, as being indefinite for failing to particularly point out and distinctly
claim the subject matter which applicant regards as the invention.

a.   Claim 46 recites "sending, by said guardian center, a digitally signed continuation message to said supervising program, said continuation message comprising a portion of said call-up message". However, this step is triggered by the previous step of the guardian center successfully verifying the call-up message. Claims 48 and 51-53 are directed to what happens when the call-up message is invalidated. Therefore, it is not obvious to one of ordinary skill what happens to the continuation message in this case.

Claim 48 is also rejected because it recites "upon failure of said verification" and it is not clear to one of ordinary skill which "verification" step the claim is referring to. The verifying step of claim 46 or 47.

Claim 50 recites sending a stored continued message. However, claim 49 from which claim 50 depends teaches storing the "received call-up message" of claim 46. Therefore, for claim 50 to be logical it has to occur prior to the sending of the call-up message of claim 46 or stored a priori by the guardian center.

b.   Claims 60-64 recites the limitation "storing... said hash function values of said tag tables" in lines 6-8 and "... computing said hash functions values of said tag tables..." in lines 10-11. There is insufficient antecedent basis for this limitation in the claim.

Claims 61-64 are also rejected as they depend from claim 60.

Claim 61 is also rejected as it recites "user device descriptive values in said tag tables sent in said plurality of most recent call-ups". However, the user descriptive values are not part of a call-up message. One of ordinary skill, looking at claims 46 and 61, is not provided with a time parameter for determining when the "storing of user device descriptive values" occurs in the context of hashing a tag table and sending a call-up message.

Claims 62-64 are also rejected as they depend from claim 61.

Claim 64 is also rejected as it recites "said tag tables sent in said plurality of most recent call-ups" in lines 4 and 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 67 recites the limitation "... a portion of superfingerprints included in continuation messages sent to said supervising program in previous call-ups". Call-ups are messages from a user device to a guardian center. Claim 67 also recites "said superfingerprints stored on the user device" in line 7. However, neither claims 67, nor 46 or 66 recite a user device storing a superfingerprint.

Claim 68 recites the limitation "said user device time" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 72 recites the limitation "that said total usage measured across all items..." in line 3. There is insufficient antecedent basis for this limitation in the claim.

8.　　　　Claims 49, 50 and 67 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

The omitted steps are: Call-up message can be completed.

This is necessary as the method steps of claims 49 and 50 do not occur during normal processing described in claim 46 (Specification, page 40, lines 1-28; page 41, lines 1-28; page 42, lines 3-8).

In claim 67, the omitted steps are: including a time in the call-up message, verification on the part of the guardian center of the time in the call-up message (See Applicant's figure 13A).

Claim Rejections - 35 USC § 103

9.　　　　The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10.   Claims 46-53, 55, 56, 65, and 68 rejected under 35 U.S.C. 103(a) as

being unpatentable over Child et al., U.S. Patent No. 6,341,352 in view of Swift et

al, U.S. Patent No. 5,719,941.

As per claims 46-, Child et al. teach a method for controlling a user's

access to online resources comprising:

- a call-up message (figures 4 and 5)

- sending a call-up message comprising a first tag table value, an identifier

  of said tag table and a second tag table value to a guardian center (figures

  4 and 5; column/line 6/29-7/65)

- a center verifying that the second tag table value is associated with the

  identifier and is a most recently stored value in a list of tag table values,

  appending the first tag table value to the list upon verification and sends a

  continuation message to a user comprising a portion of said call-up

  message (figures 4 and 5; column/line 6/29-7/65)

- sending a stored continuation message upon verification of a call-up

  message (figure 5)

- sending a message indicating the failure of a second table value

  verification (figure 4)

The method of Child et al. is implemented over the internet using a browser

(figure 1; column 1, lines 12-32; column 4, lines 16-44), therefore, Child et al.

teach verifying that a portion of a continuation message is equal to the

corresponding portion sent in said call-up message and upon failure of said

verification performs a new "call-up" to said guardian center (i.e. caching). Child

et al. do not teach digitally signing a communication between parties. However,

the Examiner takes Official Notice that the use of digital signatures (e.g.

superfingerprints) for authenticating communications is old and well known. The

Examiner also takes Official Notice that the storing of correspondence or

requests, as well as the time and date of said correspondence or request,

regarding user personal information, between a user and a service provider is old

and well-known to those of ordinary skill of customer service. Child et al. refer to

the use of call-up messages to implement and/or reflect specific security policies

(column 7, lines 35-40). Therefore, it would have been obvious to one of ordinary

skill in computer security to require a user to provide verification during any event

that is deemed "secure" such as the loading of software, utilization of computer

resources, and accessing sensitive documents. Child et al. also do not explicitly

recite the use of hashing. Swift et al. teach calculating hash function values and

sending a call-up message comprising a first hash value, tag table identifier and

a second hash value (column/line 7/48-8/47). In the performing of said

calculations, Swift et al. introduce random values (e.g. a "salt") into said call-up

messages (column 4, lines 13-21; column 10, lines 28-35). Swift et al. also teach

comparing the second hash value against a list of stored hash values, and

appending the first value to the list (figures 1-3; column 7, lines 9-28; column/line

7/48-9/41). Swift et al. teach validating by a server a tag table [value] by

comparing it against specific policies (column 9,lines 28-41) that prevent a tag

table [value] from being entered that does not conform with said policies. This

policy also, necessarily, rejects future call-ups using said tag-table identifier.

However, it has been held (*In re Japiske*, 181 F.2d 1019, 1023 86 USPQ 70, 73

(CCPA 1950)) that it would have been obvious to one of ordinary skill to

implement this function on the client end in order to save network resources by

reducing the number of client-server exchanges. Therefore, it would have been

obvious to one of ordinary skill to combine the teachings of Child et al. and Swift

et al., because by storing tag table values as hashes an attacker who accesses

the guardian centers list of values cannot readily access the tag table values

from its corresponding hash value.

11. Claims 54, 57-59, 60-64, and 69-72 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Child et al., U.S. Patent No. 6,341,352 in view of

Swift et al, U.S. Patent No. 5,719,941 as applied to claims 46 and 47 above and

in further view of Kadooka, U.S. Patent No. 5,606,663.

As per claims 54, Child et al. teach a method for supervising software

usage comprising user call-up messages (figures 4 and 5). Similarly, Swift et al.

teach supervising software usage comprising secured call-up messages (figures

2-7). However, neither specifically recites replacing an old hash function value

with a new hash function value on a user system. Kadooka teaches a user

system for updating tag-table values comprising replacing a new value with an

old value in a table (figure 3). Kadooka also teaches controlling call-up messages

by measuring time and total usage (abstract; figures 2 and 4b) and storing user

device descriptive values in a tag table (figure 3). Further, as the Kadooka

system is based on time measurement it would have been obvious to have the

clocks of the various system components synchronized in order to have an

operable system (figure 4b). Regarding claims 60 and 61, it has been held that

duplicating a feature for a multiple effect would have been obvious to one of

ordinary skill (*In re Harza*, 274 F.2d 669, 671, 124 USPQ 378, 380 (CCPA

1960)). Claims 62 and 63 are directed to a searching a database. Child et al.,

Swift et al. and Kadooka a search of tag tables and/or tag table values. The

values that are being searched for represent non-functional data, as what is

being searched for does not affect system processing. Regarding claim 64, Swift

et al. recite controlling the selection of tag table identifier values that do not

comply with tag table value selection criteria by disabling said call-up messages

that contain the offending value (column 9, lines 28-38). Hence, it would have

been obvious to one of ordinary skill in secure call-up messaging to prevent the

registration of tag table values by a guardian center that may result in the

comprising of the system, for example, when said value is used by too many

users. Therefore, it would have been obvious to one of ordinary skill to combine

the teachings of Child et al., Swift et al. and Kabooka in order to save network

resources by reducing the number of client-server exchanges.

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure:

- Hyunh et al. teach password synchronization

- Tock et al. teach a lockless-lookup hash table

- Kausik teaches digital wallet with encryption

13.   Any inquiry concerning this communication or earlier communications from

the Examiner should be directed to Calvin Loyd Hewitt II whose telephone

number is (703) 308-8057. The Examiner can normally be reached on Monday-

Friday from 8:30 AM-5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the

Examiner's supervisor, James P. Trammell, can be reached at (703) 305-9768.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

c/o Technology Center 2100

Washington, D.C. 20231

or faxed to:

(703) 305-7687 (for formal communications intended for entry and

after-final communications),

or:

(703) 746-5532 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park 5,

2451 Crystal Drive, 7th Floor Receptionist.

Any inquiry of a general nature or relating to the status of this application

should be directed to the Group receptionist whose telephone number is (703)

308-1113.

Calvin Loyd Hewitt II

April 2, 2004

JAMES P. TRAMMELL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600